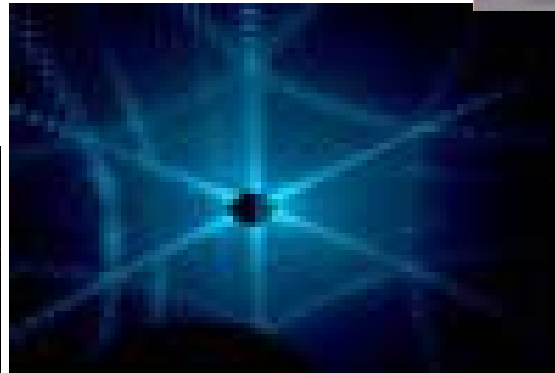
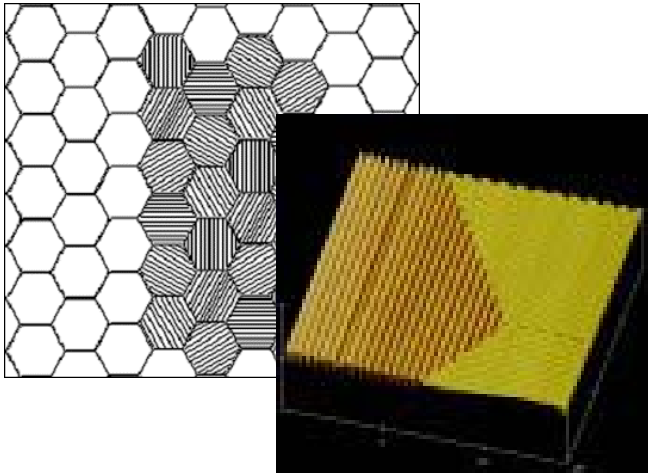
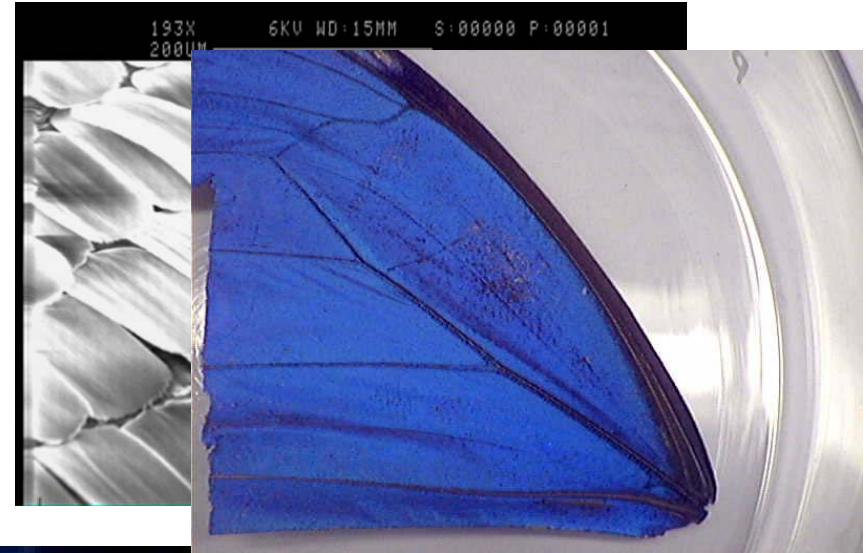
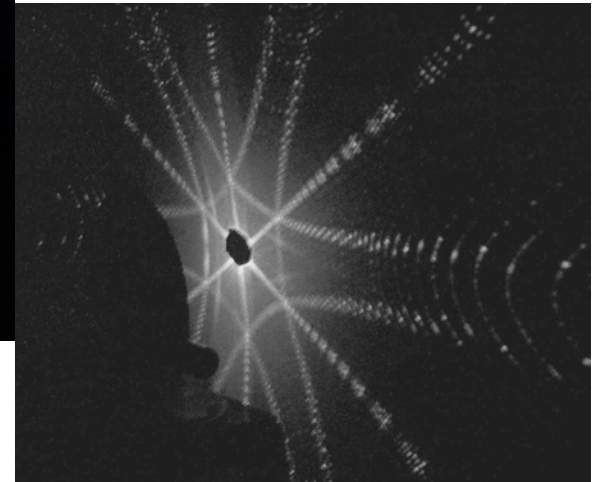


Optics: Butterfly Wings

- The Morpho butterfly demonstrates iridescent blue color over wide-viewing angles.
- Microscopy of the wings show up to 24 layers with periodic structure and that the color generation is due to interference from multilayer structure and from diffraction.
- Multi-grating structures that mimic the butterfly behavior, where the small size gratings, arranged mostly randomly, diffract white light with the diffracted beams interfering to create wide viewing angles for short wavelengths.



Diffraction pattern at normal incidence with 488 nm



Ref. T-H Wong et al., Optics Letters, 2342(2003)

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